



## State of Utah

JON M. HUNTSMAN, JR.  
*Governor*

GARY HERBERT  
*Lieutenant Governor*

## Department of Environmental Quality

William J. Sinclair  
*Acting Executive Director*

DIVISION OF AIR QUALITY  
Cheryl Heying  
Director

DAQE-IN0104810006-09

March 26, 2009

Shallen Sterner  
Ceramatec, Incorporated  
2425 South 900 West  
Salt Lake City, UT 84119

Dear Mr. Sterner:

Re: Intent to Approve: Approval Order Modification to Increase Emissions and to Install New Equipment; Salt Lake County; CDS B; Attainment Area, NSPS (Part 60), Nonattainment or Maintenance Area  
Project Number: N010481-0006

The attached document is the Intent to Approve for the above-referenced project. The Intent to Approve is subject to public review. Any comments received shall be considered before an Approval Order is issued. The Division of Air Quality is authorized to charge a fee for reimbursement of the actual costs incurred in the issuance of an Approval Order. An invoice will follow upon issuance of the final Approval Order.

Future correspondence on this Intent to Approve should include the engineer's name as well as the DAQE number as shown on the upper right-hand corner of this letter. The project engineer for this action is Maung Maung, who may be reached at (801) 536-4153.

Sincerely,

Ty L. Howard, Manager  
New Source Review Section

TLH:MM:sa

cc: Salt Lake Valley Health Department

**STATE OF UTAH**

**Department of Environmental Quality**

**Division of Air Quality**

**INTENT TO APPROVE: Approval Order Modification to  
Increase Emissions and to Install New Equipment**

**Prepared By: Maung Maung, Engineer  
Phone: (801) 536-4153  
Email: mmaung@utah.gov**

**INTENT TO APPROVE NUMBER**

**DAQE-IN0104810006-09**

**Date: March 26, 2009**

**Ceramics Manufacturing & Research Facility**

**Source Contact:  
Mr. Shallen Sterner  
Environmental and Safety Coordinator  
Phone: (801) 978-2171**

**Ty L. Howard, Manager  
New Source Review Section  
Utah Division of Air Quality**

## **ABSTRACT**

Ceramatec, Inc. has requested a modification to its Approval Order, DAQE-AN104810005-07, to increase emissions of VOC and HAPs and to increase usage of natural gas. In addition, the company plans to add four laser devices and four dust collection units that will capture the particulates from the laser exhaust. The source is located in Salt Lake City, Salt Lake County. Salt Lake County is a non attainment area of PM<sub>10</sub> and SO<sub>2</sub> and a maintenance area for Ozone. Ceramatec, Inc. is not subject to NESHAP, MACT, NSPS, or Title V of the 1990 Clean Air Act (Amended). The emissions, in tons per year, will increase as follows: VOC = + 6.01 and HAPs = + 3.26. The emissions for this source are the following, in tons per year, potential to emit totals: PM<sub>10</sub> = 0.51, SO<sub>2</sub> = 0.51, NO<sub>x</sub> = 3.10, CO = 1.03, VOC = 12.02 and HAPs = 5.25.

The NOI for the above-referenced project has been evaluated and has been found to be consistent with the requirements of UAC R307. Air pollution producing sources and/or their air control facilities may not be constructed, installed, established, or modified prior to the issuance of an AO by the Executive Secretary of the Utah Air Quality Board.

A 30-day public comment period will be held in accordance with UAC R307-401-7. A notification of the intent to approve will be published in the Salt Lake Tribune and Deseret News on March 30, 2009. During the public comment period the proposal and the evaluation of its impact on air quality will be available for the public to review and provide comment. If anyone so requests a public hearing, it will be held in accordance with UAC R307-401-7. The hearing will be held as close as practicable to the location of the source. Any comments received during the public comment period and the hearing will be evaluated. The proposed conditions of the AO may be changed as a result of the comments received.

### **Name of Permittee:**

Ceramatec, Incorporated  
2425 South 900 West  
Salt Lake City, UT 84119

### **Permitted Location:**

Ceramatec, Incorporated: Ceramics  
Manufacturing & Research Facility  
2425 South 900 West  
Salt Lake City, UT 84119

**UTM coordinates:** 422,300 m Easting, 4,507,500 m Northing  
**SIC code:** 3264 (Porcelain Electrical Supplies)

## **Section I: GENERAL PROVISIONS**

- I.1 All definitions, terms, abbreviations, and references used in this AO conform to those used in the UAC R307 and 40 CFR. Unless noted otherwise, references cited in these AO conditions refer to those rules. [R307-101]
- I.2 The limits set forth in this AO shall not be exceeded without prior approval. [R307-401]
- I.3 Modifications to the equipment or processes approved by this AO that could affect the emissions covered by this AO must be reviewed and approved. [R307-401-1]

- I.4 All records referenced in this AO or in other applicable rules, which are required to be kept by the owner/operator, shall be made available to the Executive Secretary or Executive Secretary's representative upon request, and the records shall include the two-year period prior to the date of the request. Unless otherwise specified in this AO or in other applicable state and federal rules, records shall be kept for a minimum of two (2) years. [R307-401]
- I.5 At all times, including periods of startup, shutdown, and malfunction, owners and operators shall, to the extent practicable, maintain and operate any equipment approved under this AO, including associated air pollution control equipment, in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Executive Secretary which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source. All maintenance performed on equipment authorized by this AO shall be recorded. [R307-401-4]
- I.6 The owner/operator shall comply with R307-150 Series. Inventories, Testing and Monitoring. [R307-150]
- I.7 The owner/operator shall comply with UAC R307-107. General Requirements: Unavoidable Breakdowns. [R307-107]

## **Section II: SPECIAL PROVISIONS**

### **II.A The approved installations shall consist of the following equipment:**

- II.A.1 **Ceramic manufacturing and research facility**  
plant wide
- II.A.2 **Baghouse manufactured by Torit, model # 1150-155**  
Baghouse attached to two ball mills, three V-blenders and an attritor
- II.A.3 **Baghouse manufactured by Faar, model # GS2**  
Baghouse serving laser cutter
- II.A.4 **Baghouse model 84-BVBS-9III**  
Nitro-atomizer baghouse serving two spray dryers
- II.A.5 **Baghouse made by Micro-Pulaire, model 253-8-30C**  
Baghouse attached to one spray dryer
- II.A.6 **Dust collector make and model, Fluid Energy Aljet**  
Made by Fluid Energy Aljet, model 9S C00831 G, attached to micro-jet mill
- II.A.7 **Emergency generator**  
Onan/Cummins rated at 170 hp
- II.A.8 **Emergency generator**  
Onan/Cummins rated at 380 hp

- II.A.9           **Fume hoods**  
Various laboratory fume hoods vented to the roof of the facility
- II.A.10          **Water heater**  
Natural gas fueled water heater
- II.A.11          **Electric Kiln**  
High temperature kiln, Ceramatec model B-3, rated at 1650 degree centigrade and 375,000 Btu per hour heat input
- II.A.12          **Electric Kilns**  
Various laboratory small-scale kilns
- II.A.13          **Various shop equipment**  
Various shop equipment for molding and machining ceramic parts
- II.A.14          **Space heater**  
Natural gas fueled space heaters
  
- II.B           **Requirements and Limitations**
  - II.B.1           **Requirements and Limitations**
    - II.B.1.a       Ceramatec, Inc. shall notify the Executive Secretary in writing when the installation of the new equipment has been completed and is operational. To insure proper credit when notifying the Executive Secretary, send your correspondence to the Executive Secretary, attn: Compliance Section.  
  
If the construction and/or installation has not been completed within 18 months from the date of this AO, the Executive Secretary shall be notified in writing on the status of the construction and/or installation. At that time, the Executive Secretary shall require documentation of the continuous construction and/or installation of the operation and may revoke the AO. [R307-401-18]
    - II.B.1.b       The consumption of natural gas shall not exceed 13,000 decatherms (12.85 million cubic feet) per rolling 12-month period.  
  
To determine compliance with a rolling 12-month total the owner/operator shall calculate a new 12-month total by the twentieth day of each month using data from the previous 12 months. Records of consumption shall be kept for all periods when the plant is in operation. Natural gas consumption shall be determined by utility bill. The records of consumption shall be kept on a monthly basis. [R307-401]
    - II.B.1.c       The owner/operator shall use #2 fuel oil as fuel for emergency diesel generators. [R307-401]

II.B.1.d The plant wide emissions of VOCs and HAPs from this source shall not exceed:

12.02 tons per rolling 12-month period for VOCs  
 4.81 tons per rolling 12-month period for toluene (included in VOC)  
 5.25 tons per rolling 12-month period for HAPs

Compliance with each limitation shall be determined on a rolling 12-month total. Based on the twentieth day of each month, a new 12-month total shall be calculated using data from the previous 12 months. The VOC and HAP emissions shall be determined by maintaining a record of VOC and HAP emitting materials used each month. The record shall include the following data for each material used:

1. Name of the VOC and HAPs emitting material, such as: solvent, thinner, reducers, etc.
2. Density of each material used (pounds per gallon)
3. Percent by weight of all VOC and HAP in each material used
4. Gallons of each VOC and HAP emitting material used
5. The amount of VOC and HAP emitted monthly by each material used shall be calculated by the following procedure:

VOC or HAP = (% by weight)/100 x (Density in pounds/gal) x Gal consumed x (1 ton/2000 pounds)

6. The amount of VOC or HAP emitted monthly from all materials used
7. The amount of VOCs or HAPs reclaimed for the month shall be similarly quantified and subtracted from the quantities calculated above, to provide the monthly total VOC or HAP emissions. [R307-401]

II.B.1.e Visible emissions from any stationary point or fugitive emission source associated with the source or with the control facilities shall not exceed 20% opacity on diesel generators and 10% on all other operations. The Opacity observations of emissions from stationary sources shall be conducted in accordance with 40 CFR 60, Appendix A, Method 9. [R307-401]

II.B.1.f Emergency generators shall be used for electricity production operation only during periods when electric power from the public utilities is interrupted except for operation and maintenance. Records documenting generator usage shall be kept in a log and they shall show the date the generator was used, the duration in hours of generator usage, and the reason for each generator usage. [R307-401]

**PERMIT HISTORY**

The final AO will be based on the following documents:

Is Derived From  
Incorporates  
Incorporates  
2009  
Incorporates  
Supersedes

NOI submitted on 8/4/08 dated  
Additional information submitted dated February 3, 2009  
Additional information submitted on 1/28/09 dated January 28,  
  
Additional information submitted dated March 3, 2008  
DAQE-AN104810005-07 dated June 25, 2007

## ACRONYMS

The following lists commonly used acronyms and their associated translations as they apply to this document:

40 CFR	Title 40 of the Code of Federal Regulations
AO	Approval Order
ATT	Attainment Area
BACT	Best Available Control Technology
CAA	Clean Air Act
CAAA	Clean Air Act Amendments
CDS	Classification Data System (used by EPA to classify sources by size/type)
CEM	Continuous emissions monitor
CEMS	Continuous emissions monitoring system
CFR	Code of Federal Regulations
CO	Carbon monoxide
COM	Continuous opacity monitor
DAQ	Division of Air Quality (typically interchangeable with UDAQ)
DAQE	This is a document tracking code for internal UDAQ use
EPA	Environmental Protection Agency
HAP or HAPs	Hazardous air pollutant(s)
ITA	Intent to Approve
MACT	Maximum Achievable Control Technology
NAA	Nonattainment Area
NAAQS	National Ambient Air Quality Standards
NESHAP	National Emission Standards for Hazardous Air Pollutants
NOI	Notice of Intent
NO <sub>x</sub>	Oxides of nitrogen
NSPS	New Source Performance Standard
NSR	New Source Review
PM <sub>10</sub>	Particulate matter less than 10 microns in size
PM <sub>2.5</sub>	Particulate matter less than 2.5 microns in size
PSD	Prevention of Significant Deterioration
R307	Rules Series 307
R307-401	Rules Series 307 - Section 401
SO <sub>2</sub>	Sulfur dioxide
Title IV	Title IV of the Clean Air Act
Title V	Title V of the Clean Air Act
UAC	Utah Administrative Code
UDAQ	Utah Division of Air Quality (typically interchangeable with DAQ)
VOC	Volatile organic compounds